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How does FDI react to Fiscal Policy? The case of Romania

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Abstract

By analysing the evolution of FDI in Romania during 2007-2011, the present paper try to highlight some of the challenging aspects related to the fiscal policy and FDI relation from the viewpoint of the sustainable development requirements for Romania's economy and of increasing its performance with respect to convergence and competitiveness after its EU integration. In this purpose the paper focuses on two different fiscal tools for influencing a foreign investor's location decision, i.e. corporate tax rate and/or provision of public inputs. The paper provides a new perspective on the issue of why FDI are attracted or not by the emergent countries. The study is based on the hypothesis that the competition among countries for attracting FDI does not represent the final goal, but a means for sustainable development and economic-social welfare. In this perspective, the final objective of the paper is the answer to the following question: "Under what conditions Romania will win in the competition for FDI with other (asymmetric) country?"

Keywords: fiscal competition, foreign direct investment, emergent economy

1. Introduction

The multiple benefits of foreign direct investment (FDI) inflows on the host economy and the profits for the multinational companies were the subject for many researchers: Estrin and Meyer, 2004; Resmini, 2000; Kostevc et al., 2007. The positive impact of FDI on economic growth has been confirmed by a number of studies: Neuhaus, 2006; Lunn, 1980; Buckleyet et al, 2002; Carkovic and Levine, 2002; De Mello, 1999. These effects are especially important in the context of economic development and represent a reason why countries, trying to promote economic growth, engage in competition for FDI: Billington, 1999; Aleksynka, 2003. The literature in the field reveals that, due to the globalization of the world economy, the importance of market size diminishes more and more and small countries are able successfully to compete as well, intensifying the competition even further: Oman, 2000; Blomström and Kokko, 2003. The literature on the subject of corporate

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taxation in European Member States, as a determinant for FDI, is fuelled by one central question: "Is regulated tax harmonization or is tax competition the best solution to the awkward state of asymmetric tax rates that currently exists in the EU for creating a better business environment?" The existing viewpoints run the gamut from entirely pro-harmonization to pure pro-competition stances: Smith, 1999; Stults, 2009; Nerudova, 2008. Some researches reveal that higher tax jurisdictions in the EU offer qualified labour force and stable business environment: Smith, 1999. According to Mitchell, 2002 tax competition generates responsible tax policy because the increased capital mobility toward low tax jurisdictions. Tax competition can be considered a very important factor supporting the economic liberalization of the world by creating the pressure on decrease in tax rates, important especially for emergent countries in order to achieve the performance with respect to convergence and competitiveness Gondor and Nistor, 2012b. Some researchers consider that from the perspective of potential foreign investors, the general business environment may be more important than specific incentives Meyer, 2005. The business environment includes some aspects that can be influenced by government policy such as "the bureaucracy handling approval or registration of new businesses, or the efficiency of regulatory institutions": World Bank, 2005. In another recent work, we have argued that FDI is concentrated mainly in the developed economies despite the higher level of taxation, concluding that higher tax rates create better business environment: Gondor and Nistor, 2012a. The rest of the paper is organized as follows: Section 2 describes the data and discusses our empirical strategy regarding the FDI in Romania. Section 3 presents our main results on the estimated effect of fiscal policy on the location of FDI and Section 4 concludes.

2. Data and Empirical Methodology

The analysis of FDIs patterns and dynamics in Romania mainly refers to the period 2007-2010, using data from National Bank of Romania (available only until the end of 2010 at the time of the analysis). Together with FDI inflows we use FDI stock because we are interested to study the FDI structure in Romania by countries of origin and capital stocks are a closer proxy to multilateral activity than investment inflows.

Table 1. The evolution of FDI during 2007- 2010 in Romania

Year	2007	2008	2009	2010
FDI inflows (million EUR)	7.250	9.496	3.488	2.200
$\Delta FDI_{1/0}$ (million EUR)	NA	2.246	-6.008	-1.288
I $FDI_{1/0}$ (%)	NA	130.98	36.73	63.07
FDI stock (million EUR)	42.770	48.798	49.984	52.585
ΔFDI stock $_{1/0}$(million EUR)	NA	6.028	1186	2.601
I FDI $stock_{1/0}$ (%)	NA	114.09	102.43	105.20

As it can be seen in table 1, during 2007-2010 the FDI volume grew relatively quickly in Romania, due to the relatively higher profit opportunities that could be valorised in Romania by foreign investors. The year 2008 is the record year in terms of FDI inflows for the analyzed period. The level of FDI inflows was 9496 million euro, which means an increase of 30.98% compared to 2007. Between 2009 and 2011 the FDI inflows have decreased dramatically. The largest decrease was recorded in 2009 by 6.008 million euro compared to 2008, meaning a decrease of 63.27%. In 2009 and 2010, Romania attracted FDI inflows in amount of 5.688 million euro, well below the level reached in 2008. Although the FDI stock has increased during 2007 - 2010, it can be observed that after 2008 the growth was smaller compared to the FDI inflows. This shows that after 2008 there were many investors who left Romania. As the media reported, in 2008, the ice cream production capacity of Nestlé moved from Romania to Bulgaria; In 2009, Kraft Foods ice cream production capacity was also

relocated to Bulgaria and Coca Cola moved from Romania to Moldova. They were followed by other investors such as Nokia, Van Melle, Tnuva. Knowing that corporate tax rate in Bulgaria is 10 % (the lowest in EU) and in Moldova is 0, we can assume that the investors' decision can be attributed to lower taxation in these countries comparing with Romania, where corporate tax rate (CTR) is 16%.

Table 2. The FDI stock distribution during 2007- 2010 in Romania by countries of origin and CTR

Year	2007	2008	2009	2010	CTR 2007-2010 (%)
Total (million Euro)	42.770	48.798	49.984	52.585	
Of which (%):					
Netherlands	16.3	17.2	21.8	20.7	25.0
Austria	21.4	18.8	18.1	17.8	25.0
Germany	11.7	15.4	13.4	12.2	29.8
France	8.8	8.8	8.5	8.3	34.4
Greece	7.5	6.5	6.6	5.7	35.0
Italy	6.1	7.3	5.1	5.3	31.4
Cyprus	4.7	3.9	4.7	4.9	10.0
Switzerland	5.1	4.7	4.2	3.8	21.2
United States of America	-	1.8	2.1	2.6	35.0
Spain	1.1	1.2	1.7	2.0	30.0
Luxemburg	1.5	2.3	1.3	1.9	28.6
Czech Republic	0.8	0.7	1.2	1.8	19.0
Belgium	1.1	0.5	2.2	1.6	34.0
Hungary	1.7	1.8	1.6	1.4	20.6
Great Britain	0.9	1.5	1.0	1.2	26.0
Turkey	1.9	1.2	1.1	1.2	20.0
Other countries (less than 1% each)	5.83	6.4	5.4	7.6	

As it can be seen in table 2, the distribution of the FDI stock depending on the capital's country of origin highlights an unequal distribution between countries and a concentration of the latter in EU countries. In the analyzed period, over 50% of the stock of FDI inflows in Romania comes from Netherlands, Austria and Germany, countries with more than 10% in total FDI in Romania each of them. They are followed by France, Greece and Italy with more than 5% each of them. Regarding the CTR, as it can be seen in table 2, except Cyprus, all countries of origin of FDI enforce much higher CTR comparing with host country Romania.

3. Data Analysis and Discussions

We assume that competing countries can influence FDI flows up to a certain level by using fiscal policy instruments as strategic tools. For example, governments of competing countries can attract FDI by using a low corporate tax rate or they can invest in additional production of public inputs which may be of productive use to the investors. Both of these policies need to be financed by an optimal fiscal policy. Since competing countries are different, their optimal policies usually differ. In this perspective, a question arises: "Which is the optimal solution the government may use in order to attract FDI?" or in other words "Under what conditions Romania will win in the competition for FDI with other (asymmetric) country?"

Analyzing the above presented dynamics and structures of FDI in Romania during 2007-2010 (table 1 and table 2) together with the researches in the field we tried to find out why foreign firms invest in Romania and why so many foreign investors left Romania in recent years. The Scientific literature provides us some answers. According to Neo-classical investment model the investment should be a function of expected future interest rate, prices and taxes: Clark, 1979. Some researchers consider that "foreign investors in emerging economies

pursue one or both of two objectives: access to local markets through local production and/or sale of imported products; export-oriented production on the basis of local resources such as low cost labor, natural resources, or (less common) human capital (Klaus, 2005). Most researchers agree that FDI is attracted to countries offering profit opportunities: OECD, 2008; Vintila 2010; Krautheim and Eisenlohr, 2011. Based on these research results this study will try to determine the way in which the government can influence the profit opportunities for foreign investors considering that actions in the general taxation field must comply with the general aim of the EC Treaty which requires to avoid excessive deficits. By taking into consideration the reduction of the importance of market size due to the globalization of the world economy, in the present study the asymmetry between Romania and the other competing countries is created by the assumption of differences in fiscal policies, instead of the assumption of differences in market size; as a result, the market size aspect is neglected. As a consequence the Romanian markets is assumed to be perfectly integrated with no administrative trade barriers and with tariffs and transportation costs both equal to zero. Considering that in terms of economic development level the competing countries are clustered on two general categories i.e. developed and emergent economies, we consider Romania as part of the latter. The economic development level of Romania represents a source of asymmetry which, according to the empirically observations is reflected in the smaller capital stock, low infrastructure, low supplies of other public goods and smaller wages. Based on the above presented sources of asymmetry we tried to build a production function with three arguments: $Y = F(K, LC, PI)$, where Y denotes the output, K denotes the capital, LC denotes labour cost and PI denotes public inputs. A production function is a relationship that indicates the maximum level of the production Y which can be obtained from various combinations of arguments, irrespective of the technology.
We assume that:

1. $P>0, K>0, LC>0, PI>0$ (1)

2. The absence of the production factors determines a zero output:

$$\lim_{\theta \to 0} f(\theta K, \theta LC, \theta PI) = 0 \quad (2)$$

3. The absence of a single factor of production leads to a zero output:

$$\lim_{\theta \to 0} f(\theta K, LC, PI) = \lim_{\theta \to 0} f(K, \theta LC, PI) = \lim_{\theta \to 0} f(K, LC, \theta PI) = 0 \quad (3)$$

4. Government levies capital tax in order to finance the supply of public inputs. Assuming that the entire amount is used for financing public goods,

$$KTr = PI \text{ , with } PI, Tr \geq 0 \text{ ,} \quad (4)$$

Where Tr denotes tax rate on capital K.
Not to complicate the model we consider that Tr is the corporate tax rate. In the future work we will take into consideration the payroll taxes and possibly other taxes on business (e.g. property tax). By using fiscal tools in order to attract FDI the government is not allowed to discriminate between domestic and foreign firms therefore the same tax rate is applied on both domestic and foreign investor's capital. The government can raise capital tax and use the revenue for the production of public inputs that enter the production function for all investors affecting the profit of the foreign investor in the country in which he decides to invest. Thus, a higher supply of public goods can help attract the foreign investor. Following taxation, the investors will calculate the disposable income DI and the profit P.

$$DI = Y - KTr \quad (5)$$

$$P = Y\text{-}C\text{-}KTr = F\,(K, LC, PI)\text{-}C\text{-}KTr, \quad (6)$$

Where C denotes the input costs.

From the equation (6) it is clear that the investor profit is negatively related to the taxation level, therefore lower taxation will generate higher profit.
But, on the other hand, the foreign investor's profit is positively related to the supply of public inputs:

$$0 < \frac{\partial P}{\partial PI} < 1 \quad \text{And} \quad \frac{\partial^2 P}{\partial PI^2} < 0 \quad (7)$$

Since the public inputs depend on the taxation level (equation 4), the government in competition for attracting FDI has to face an equilibrium problem between additional output/profit of companies due to higher supply of public goods and the possibly higher tax burden which reduces the output/profit of investors.
The results reveal that FDI is attracted to countries offering: access to markets and profit opportunities, low taxation, low cost of labour and well-developed infrastructure. All of these factors will influence the long-term profitability of a project. It results that there may be situations in which a less developed economy will attract foreign direct investment depending on the taxation level, labour cost differential and the ability of the government to spend efficiently the public revenue for the supply of public inputs. The table 2 shows the high differences between the CTR in Romania and the CTR in countries of origin of the main investors in Romania. Based on this reality and taking into the consideration the importance of the infrastructure, the solution could be the increase of taxation in Romania for investing in public goods. But considering the actual economic level of Romania we agree that the business environment cannot bear a higher tax burden. More than that, based on our researches we stand for a reduction of business taxation especially of the payroll taxes, considering their incentive role. As a consequence, the priorities to be supported by fiscal policy in order to attract FDI in Romania refer to the following: creating a business-friendly tax administration marked by certainty, predictability, consistency and timeliness in the application of tax rule, certainty of tax treatment, in many cases these considerations being as important as the effective tax rate paid. The above measures do not require supplementary public funds. In order to obtain public revenues for the supply of public inputs e.g. infrastructure, our recommendations are the following: reducing tax avoidance and tax fraud and stopping or at least reducing the waste of public revenues, both representing huge revenue sources for the required public inputs.

4. Conclusion

There are situations in which consideration of public inputs will increase a less developed country's chances of winning the investment. According to our researches we can conclude that a tax reduction is able to attract FDI but it is not sufficient. Even the investors who have chosen to invest in Romania being attracted by low taxation have reconsidered their position by seeking other opportunities for profit in other locations. It becomes clear that a low tax burden cannot compensate for a generally weak or unattractive FDI environment. Tax is but one element and cannot compensate for poor infrastructure, limited access to markets, or other weak investment conditions. A low corporate tax rate will not attract the FDI if the fiscal policy generates an unfriendly business environment marked by unpredictability, lock of transparency, fiscal ambiguity, tax avoidance and tax fraud; a high corporate tax rate will stimulate the FDI flows if the revenue is used to provide public goods that improve the environment in which investors operate.

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